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ABSTRACT

Recent reviews of the literature demonstrate that there is little research providing insight into the nature of hospital communication. Using the model of the sociology of communication, five specific research questions can be generated about hospital communication: (1) How is information processed? (2) What communication is satisfying? (3) What are the internal feedback mechanisms of the organization? (4) What factors constrain communication? and (5) How is communication related to organizational effectiveness? An application of these questions to a review of the literature about hospital communication reveals that employees of hospitals have less of a need for information than employees of other organizations; that employee uncertainty is related to satisfaction with the organization; that individual responses to a lack of feedback include unionization, a method of formalizing feedback; that the perceptions of individuals employed in hospitals are constrained by the usual physical and historical factors such as age, educational level, and sex; and that there are no data to support the claim that there is a strong relationship between communication and hospital effectiveness. (HOD)

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Research Questions and Some Tentative Answers About Hospitals: Modeling The Sociology of Communication.

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INTRODUCTION

After a review of hospital research between 1960-70, Georgopoulus (1975) concluded the following: (1) most research relies on questionnaire and interview data gathering techniques; (2) the research tends to be descriptive and atheoretical; (3) the research focuses on microscopic issues related to management and nursing with only 26% of the studies at the "systems level" or concerned with the orgnaization as a whole; (4) the most frequent research areas include organizational/group/individual effectiveness, resource allocation, and social integration while the least researched areas were adaptation and coordination; and (5) the quality of the research was low. In attempting to update this review and focus only on topics relevant to organizational communication (areas Georgopoulus had subsumed under "integration," "adaptation" and "coordination"), Hite and Hite (1977) abandoned their review of journals because of the generally poor quality and proceeded to review only doctoral research. Costello and Pettigrew (1979) provided the most comprehensive and clearest picture by attempting to integrate Georgopoulus' research and translate his terminology into more common communication nomenclature. These last two updates, however, reinforce the earlier conclusions. Little has changed since 1970.

In light of these reviews, the purposes of this essay are the following: (1) to provide a general model for the study of communication; (2) to employ that model to generate research questions about hospital communication; (3) to review the existent research in search of answers to those questions; and (4) to direct research to areas which need further investigation.

A GENERAL COMMUNICATION MODEL

Human communication is an information exchange process that is best modeled as a social system. A system is a set of interrelated components (Kuhn 1975, p. 10), and an analysis of a phenomenon as a system must describe the salient features of the components (Hall & Fagan, 1956). Since we seek to model human communication, the most obvious components are humans and the messages they produce, but the phenomena that the model seeks to explain are the ways in which these elements become interdependent.

Components

Communicators

The message producers in our system are humans, and to understand the ways in which messages are produced and processed requires a consideration of the cognitive activity of the communicators. What must be described are those activities that lead ultimately to a decision or an intention to act. This internal process has been described by Fishbien (1973) and Kuhn (1975), and the communicative implications were suggested by Ackoff and Emery (1972). What follows is a brief synthesis of this earlier work.

In a given circumstance, an individual arrives at a decision or intention to act as the result of a three step process: (1) information about the circumstance are processed to produce beliefs about the type of circumstance it is, about the possible outcomes to the circumstance, and about the courses of action that are possible; (2) the beliefs about what is there are contrasted with what is wanted, the possible outcomes are assigned relative values, the individual is predisposed to act in a certain way and an attitude is produced; and finally, (3) the beliefs are contrasted to the attitudes as the individual estimates the probabilities for the courses of action attaining what is desired. The final intention is the course of action the individual believes is the most efficient method of achieving

a desired outcome. Observable behavior follows the intention. A person acts when he can determine what is going on, why he should act, and how he should act.

This description is useful because it can help us explain the performance of an organizational member. If a person does not receive as much information as is needed to determine what is going on, the resultant uncertainty will reduce the level of performance. If there is a wide discrepancy between what is going on and what is desired, dissatisfaction will limit performance. If behaviors cannot be matched to circumstances, poor judgment becomes poor performance. When the ultimate behavior is part of communication, these factors produce poor messages.

Messages

A message is intentionally produced stimuli with the potential for symbolic significance. We use the term to include the entire communitive package including both the information intended to be communicated and the ensemble of matter and energy (e. g. the words, the letters, the phone call, the sound waves) used to represent the information. Although we recognize that the information in a message may be analyzed by employing such popular terms such as "meaning" and "code," and that the matter-energy ensemble may be analyzed by employing such terms as "signal," "medium," and "channel," we chose the simpler, more inclusive term, because our presentation does not require the more detailed analyses.

A message reports an intended content, and it simultaneously instructs the intended receiver to process the content as part of a particular relational context (Watzlawick, Beavin & Jackson 1967). This second type of information, the relational cue, alerts the intended receiver to assume a particular role and to interpret the content in that role. In a conversation, the first message is one person's invitation to another to construct a relationship.

Relationships

When one person constructs messages he does so as part of a role and intended for consumption by a person assuming a compatible role. People do not direct messages at each other. They direct their messages toward a desired or expected relationship (Pearce 1976a), Humans do not communicate with each other directly, but indirectly through mutually constructed relationships.

An example is needed to explain the implications of this. John and Mary first met as social acquaintances modifying each other's expectations of male and female roles by their communication. They assumed social stereotypes and proceeded to inform each other how they differed from these roles. As their relationship developed each person's expectations of the other were based less on social and/or cultural norms and more on the emergent roles for their own idiosyncratic relationships. Their personal relationship moved to include the roles of friends, intimates, lovers, husband and wife, and parents in addition to the remnants of the earlier social stereotypes. Each person's perception of each other is increased as each sees the other in and across so many different roles. Their relationship together could now be defined as the unique network of their roles.

When John, for example, initiates a conversation with Mary, her first task is to determine which of her many roles she must play and which aspect of their relationship she is being invited to participate in. Her response will express her understanding of the situation and her agreement or disagreement to participate, leaving John with the same perceptual problems she has resolved. They will negotiate the relationship until they both understand each other and agree to a particular relationship. They will have accomplished some perceptual coorientation.

If there is little coorientation, there will be some confusion or

disagreement. There will be the danger that one person may "take" the message the "wrong way." The greatest dangers would result if both members totally misunderstood the intended relationship of the other. If John is speaking from a role to a role that Mary does not believe she is playing, and if Mary is speaking from a role to a role that John does not believe he is playing, they are, in effect, not speaking to each other. We believe that some minimum perceptual coorientation among people about their relationship is a necessary condition for communication between them.

There is research that investigates these perceptual problems in organizations. The studies focus on superior-subordinate relationships and the coorientation people have about the communication rules for those relationships (Farace, Monge, & Russell 1977). Without coorientation about formal role relationships, coordinated activity is impossible. These problems become amplified when one considers worker-work group, worker-department, worker-organization, work group-department, work group-organization and department-organization relationships as part of a larger sociological analysis.

Episodes

An episode is coordinated communicative behavior. It is a sequence of interdependent messages. One message may be dependent on the other as part of a turn-taking pattern, as an answer to a question, submission to a command, a display of affection as a response to a similar display, or a request permitted by the previous message. Messages have varying degrees of interdependence (Berlo 1960; Pearce & Conklin 1979).

A person may construct a message, but at least two people construct an episode. An episode is a coordinated activity requiring people to place their messages in such an order that the meaning of the episode could not be perceived if one considered the messages of each person in isolation.

If the meaning of a message is not altered when it is considered as part of a sequence, the message is not dependent on other messages; there is no episode. If there is no episode, there is not a coordinated management of meaning (Pearce, 1976b), and the people that produced those messages are not communicating with each other. Therefore, feedback, a response that elicits a response, is the minimal behavioral indication of an episode and is the minimal behavioral evidence that participants are communicating with each other.

Although an individual may construct a message in isolation, the pragmatic significance of the message (the "actual" meaning) is part of the episode. This is so because communicators cannot perceive each other's messages in isolation, but must assign meaning to portions of an on-going flow of messages. A message is meaningful as part of an episode in much the same way that a word is meaningful as part of a sentence. The episode, not the message, is the input to a communicator that is the basis for his perceptions. This brings the model full circle and the description of the entire cycle is what follows.

Interrelationships Between Components

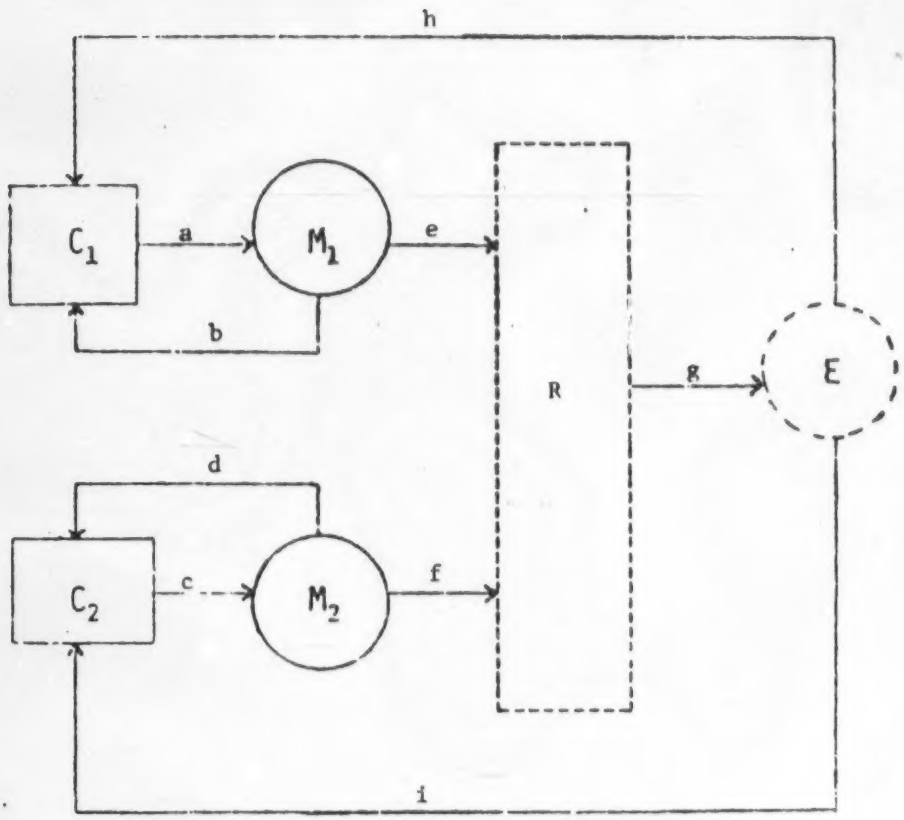
The structure of a system is the set of connections or relationships among its components at any given time (Cushman & Craig, 1976; Fisher, 1980). When using the term to describe behavior across time, structure refers to regularities or repetitious cycles of behavior (see Katz & Kahn, 1978). The structure of human communication is displayed in the following flow chart:

Insert Diagram Here

C_1 and C_2 are communicators. They may be two different groups, an individual and a group, organizations, . . . anything that can produce a message (M_1 and M_2 in the diagram). There may also be more than two C's, but in order to simplify our explanation we will confine our analysis to

DIAGRAM 1

STRUCTURE OF COMMUNICATION



a circumstance when one person confronts one other.

C's construct M's and the arrows from C_1 to M_1 (a) and from C_2 to M_2 (c) represent the influence of a person on the messages he creates. While a person's attitudes, beliefs and intentions determine his individual messages, his own messages influence his own attitudes, beliefs and intentions as he evaluates his own ability to construct messages. The arrows from M_1 to C_1 (b) and from M_2 to C_2 (d) represent the influence of a person's own messages on the person constructing those messages. A communicator and the messages produced by the communicator are, to an extent, mutually dependent on one another.

Two lines (e and f) show that M_1 and M_2 are directed at R, the relationship or any socially constructed reality. R may be very personal (e.g. friendship, lovers, brother, etc.), informal (e.g. acquaintances, students, etc.), or formal (e.g. superior-subordinate). All of the C's in any particular relationship may be part of the communication (e.g. both parties to a marriage), but communication often happens when only a portion of R is present (e.g. mother talking to daughter as part of family). The important thing is that R will influence how one communicator sees another communicator's messages, and this is the explanation for M_1 not being aimed directly at C_2 and for M_2 not being aimed directly at C_1.

R produces E_1, an episode. An episode is a sequence of messages such that one message influences another. Sometimes this patterning in the messages could be deciphered by nearly anyone, but at other times the patterning is recognizable to only C_1 and C_2. In the latter case, this means that either R is very personal or that R is a social context that you, an observer or intruder, are not familiar with. If you have ever entered a conversation and had to stop to figure out what was going on, you understand the connections between episodes and relationships.

It is from E_1 that the C's learn what each other is saying. It is from the context of what was said before and what came later that we finally determine the meaning of a particular M.

Both R and E are in dotted lines. Sometimes people do talk in the presence of other people with very little regard for who they might be talking to or who might be listening to what they are syaing. Sometimes people talk to themselves while other people watch. Just about the only pattern that emerges is a turn-taking pattern in which one talker stops while the other person talks. There is very little influence by a relationship and very little patterning in the episode. There is also very little communication between C_1 and C_2.

The dotted lines also account for the circumstances when two C's have different ideas about what R is. You may think you are talking to a friend, but the firend may think that she is talking to a competitor. E will have a very erratic pattern.

The flow chart also has two different lines (h and i) from E_1: one line to C_1 and one line to C_2. This represents the tendency for each C to take different patterns from E. A good way of judging if two C's understand each other is to compare their impressions of E. The more these two impressions are similar, the more the two C's understand each other.

E is a reflection of R in the same way that M is a reflection of C. The extent of interdependence in E is reflective of the C's coorientation regarding R. If E can be defined by a set of communication rules, it simply means that the C's understand the portion of R that is reflected in the content of the rules about E.

RESEARCH QUESTIONS

Maintaining the entire cycle requires information with a minimum of noise. A communicator's intentions, especially those involving the perceived relationship with another, must be represented in his messages. The relational content in his messages must be clear enough in the episode for the other communicator to accurately perceive his intent. The organization, a relationship, requires information, and it must provide information to those communicators that provide information to it. The organization must take care when distributing the information through its episodes since an attempt to avoid distortion could produce overload. Information acquisition, storage, retrieval, distribution, and use are fruitful avenues of research.

Appropriate information may be sufficient to maintain the cycle, but information alone will not insure quality participation in the cycle. Function refers to the way a system fulfills its purposes or goals (Dance & Larson, 1976; Sztompka, 1974), and an investigation of the system's structure or cycles will not reveal the functional aspects of a system. The function can only be examined by considering the inputs and outputs to a system and by matching outputs with the inputs they elicit. An examination of a hospital's function in a community would, for example, determine the goods and services provided which yield the greatest reward. Our purpose is to examine the functioning of the subsystems that are part of the throughput structure we have already explained. We are interested in internal function.

For an individual in a hospital, continued participation is contingent on some type of reward. A communicator offers messages in an attempt to earn some reward from the episode or, in a purely technical system, the individual offers skills and labor to realize some reward from the organization's output. The individual's continued functioning as part of the

whole system is dependent on the person's ability to provide the input, communicative or otherwise, that will necessarily produce a personal reward.

The organization (an R) has similar problems. It must insure that its members choose to provide the input desired by the organization. Individuals, it must be remembered, are not part of an organization (an R) in our model. Individuals partially include themselves in an organization, as they do in any relationship, by providing only a portion of their competence and social selves as part of a role in the system (see Katz & Kahn, 1978). As people construct relationships or contrive organizations, they must also include some system of mutual reward to insure that individuals will provide the input needed to keep output at desired levels. (Galbraith, 1977). Ultimately, this means that in order for the organization to achieve what it wants, it must provide individuals what they want. Communication satisfaction is our interest.

No information flow and/or method of communicative reward can be fixed. The system must adapt to change, and how a system changes is called its process (Cushman & Craig, 1976). On the one hand, an individual needs to adapt to changes in the relationship or organization while, on the other hand, the organization needs to adapt to changes in the individual. None of this is possible without feedback within a particular episode and across the entire range of episodes. Positive and negative feedback loops must be identified between messages and episodes, and between differing episodes. Internally stimulated growth, stability, and decay are our concern.

A system's structure, function and process are constrained by its environment. In the system we have described both individuals and the organization are constrained. Individual activity in a particular relationship is constrained by physical traits (e.g. health, age, sex, etc.), by history

(e.g. education, previous employment, etc.), and by the episodes from other relationships. The organization is constrained by physical, economic and political input, and by its involvement with other social relationships. The entire communication system is constrained by the technological system, that configuration of relationships through which non-symbolic input and output flows. Communication is only the social portion of a socio-technical system (Pasmore & Sherwood, 1978), and no description of a system could be complete unless the constraints are noted.

The technological subsystem of an orgnaization is influenced by the social subsystem (Pasmore, Srivasta & Sherwood, 1978), and, naturally, communication influences non-communicative behavior. Communication may be judged as effective because it provides information, reward and feedback and also because it is related to effective organizational output. The researcher must relate communication to production.

We approach organizational communication, therefore, by asking five questions: (1) how is information processed; (2) what communication is satsifying; (3) what are the internal feedback mechanisms of the organization; (4) what factors constrain communication; and (5) how is communication related to organizational effectiveness. These broad questions constitute the framework for our review of hospital communication literature. Our review was intended to discover what answers, if any, are provided to these questions.

LITERATURE REVIEW

The literature review presented here began with a computer search over the last ten years (1971-1981) of three indexes: (1) Educational Resources Information Center (ERIC), (2) Medical Literature Analysis and Retrieval Service (MEDLARS), and (3) the Hospital Literature Index (HLI). This ini-

tial search produced nearly 300 citations and a consequent search to 1965 produced an additional 160 citations. The entire search cited over 30 periodicals in addition to papers and research reports available through ERIC. Nealry sixty terms and their synonyms were employed as search cues. We excluded cues related to patient communication.

Ninety-five (95) percent of the pieces cited are not included in this review. Over eighty-five percent of the citations on our printout were what Hite and Hite (1977) called "translation pieces," instructing the reader in the application of communication principles in a health care organization. Another ten percent were reports of success stories in which successful administrators would report on the effectiveness of a communications device that "worked for them." In order to arrive at a final two dozen pieces, it was necessary to include the more detailed case studies as part of our review. In other words, there is little rigorous research about hospital communication published in journals whose focus is health care.

What follows, then, is an attempt to answer the research questions formed in the last section by employing the few pieces of research found in our literature search supplemented by some well known books and the three reviews which were noted at the beginning of this essay. This literature will be contrasted with the current research on organizational communication in general. Differences between the two bodies of literature will be noted.

The review is organized around our model. We will ask our five research questions and seek answers from the research investigating communicator, message, relationship and episode variable. Then we will comment on research which attempted to deal with interrelationships between these sets of components.

Components

Communicators

Communicator variables, by their nature, are perceptual variables and include most self report data which is generalized to describe the beliefs, attitudes and/or intentions of the people that work in a hospital. Such variables include role ambiguity, role conflict, climate, uncertainty and various forms of satisfaction. When the variable is measured as a self report, it is an outward manifestation of an internal condition.

Uncertainty is the inability to predict, and uncertainty may persist if the amount of information received is not equal to the amount needed (Galbraith, 1977). An investigation of uncertainty will help determine how information is processed from the perspective of the communicator since perceived uncertainty is the communicator's impressions of the content or lack of content in episodes. Self report data about the types of messages (e.g. written, face-to-face, etc.), the relationships involved (e.g. superior-subordinate, co-worker, etc.), particular communicative experiences and the types of information received and/or still needed will give insight into the receiving portions of the system.

The systematic investigation of communicator perceptions about the internal information processing is not the norm in organizational communication. Rather, the general perception of uncertainty is generally investigated as role ambiguity and/or role conflict. Such studies normally report the amount and nature of the uncertainty about employees' job responsibilities and their formal relationships to other roles, which are normally called task and maintenance information (Goldhaber, 1979). Longest (1975) employed interviews to compare the perceptions of personnel directors and hospital administrators about the personnel director's responsibilities and discovered surprising coorientation about most aspects of

their job (i.e. the task). What little discrepencies there were were attributed to a perceived lack of upward communication. From our perspective, this means that communicators feel that their formal scalar relationships do not allow them to initiate certain types of messages. Such problems in upward communication were also related to role conflict across several levels and functional roles in two other hospitals (Washing, 1978).

Goodfellow (1969) summarized the results of eleven morale surveys and provides some answers to our questions about satisfaction and feedback mechanisms. First, he noted the importance of communication (i.e. communicator perceptions) to overall morale. Second, he suggested that if employees did not perceive that their upward messages were being processed, they would unionize as a method to insure processing. Unions constitute an additional set of formal relationships added on to the hospital's already existing formal structure as a feedback mechanism for employees about information concerning working conditions, pay, benefits, etc. These topics are generally called human information. In other words, uncertainty about human information is correlated to morale to such an extent that the lack of information about these topics may result in employees unionizing as an adaptation to the uncertainty.

A communicator's perceptions are constrained, however. In general, as age and educational level increase, uncertainty decreases and satisfaction increases. In a hospital, however, sex is also a factor, with females expressing more uncertainty and less satisfaction. Sex apparently only influences perceptions in hospitals and banks (Goldhaber, 1979).

Communicators in hospitals possess some significantly different perceptions than employees in other organizations. They generally see less of a need to receive and a greater need to send information than the members of other organizations while they are equally as satisfied with the system

as others (Goldhaber, Porter & Yates, 1977). These differences are due, no doubt, to the level of professionalism. Hospitals are loosely structured systems, similar to universities, in which professionals are employed to exercise their expertise (Meyer, 1975). They tend to rely less on the organization supplying information than do other employees of other systems. Recall that only human and maintenance uncertainty have been identified as problems. Apparently, hospital employees tend to bring most of the information they need about the task with them.

Few studies directly relate communicator variables to task or organizational effectiveness. The assumption is often made that reduced uncertainty and role ambiguity would improve performance. Some training reports do approach substantiating this claim (see Grayson, 1977), but support is still largely theoretical. Yet to be considered and investigated are perceptions of excess in the information flow (i.e. overload) and the influences of the resultant stress (see Farace, Monge, & Russell, 1977) or the exact nature of the episodes which provide this information.

The following may be concluded: (1) Hospital employees experience the greatest uncertainty about human and maintenance contents. (2) The communication is extrinsically satisfying in as much as uncertainty is related to worker satisfaction. (3) Workers are sensitive to the existence of feedback mechanisms in the system and they may choose unionization as a method of providing such mechanisms if none are provided as part of the formal system in the hospital. (4) Internal perceptions are influenced by educational levels, age, sex and the fact that an individual is employed by a health care organization. (5) A hospital employee's communication perceptions are assumed to influence his performance, but little direct empirical evidence exists to support the claim. Georgopoulus (1975) included such topics under the heading of integration, and our updated review

generally confirms his earlier conclusions.

Messages

One would expect that messages and message types would be an over-researched area. This is, sadly, not the case. A simple answer to the first of our research questions is difficult. Garrett (1973) did attempt to classify the content and the form of the content (e.g. reports, orders, etc.) in an attempt to assist data processing, and Housley (1979) did attempt to provide instruction about the content and potential for misunderstanding the content of information sent from materials management departments to other parts of the hospital. There are no studies of the relational information of messages in a hospital.

Furthermore, aside from data processing studies such as Garrett's (1973), there are no studies as to the form of messages. What is the influence of various channels? What about the timeliness of these channels? The channel quality? Generally, this area has not been explained.

Part of the problem is a methodological one. A comprehensive analysis of messages requires trained observers cataloging messages across a hospital or the use of detailed communication diaries by organizational members trained in their use. When hospitals become more confident of the pragmatics of surveying messages and not just message users, the influence of message variables on our five questions will become more apparent.

Relationships

Relationships are a more heavily researched area since the organizational structure itself is the focus of study. Researchers investigate differences between various roles, the influence of centralization, of specialization, and the differences between formal and informal relationships. Few studies report a measure of communication, however, and there is a need to correlate social structure variables to actual communication

phenomenon.

As noted earlier, the most researched roles in a hospital have been administrators and nurses. The frequency of these research efforts has diminished. Costello and Pettigrew (1979) reported only two pieces of research about communication between physician and nurse and three pieces about communication between administrators and nurses published in the 70's. The five pieces warn about an over-emphasis on task (Bates, 1970; Hunt, 1974; Ewell, Johnson, & Von Ehren, 1974; Holloway, 1976; Bowers, 1977), but they do not describe the current status of these relationships, the satisfaction to be gained from communicating in them, or the feedback mechanisms employed.

Feedback and adaptation were the concern of Hage (1974). He reported the most ambitious description of the use of formal and informal roles for communication. He reported a heavy reliance on informal communication and an increase in the use of informal and horizontal formal networks as the uncertainty of the work environment increased. He proposed a contingency model of "channel" utilization similar to the conclusions of Lawrence and Lorsch (1969).

Heydebrand (1973) was also interested in adaptation and surveyed nearly seven thousand hospitals in an attempt to describe the various factors which influence organizational structure. Communication was not directly measured in this study, but several communicative implications arise from it. Apparently, as hospitals enter uncertain environments and attempt to process more and more information, they tend to rely on the emergent hospital and relational communication and less on formal normative means to coordinate and control. This study warrants replication with the inclusion of items which focus more directly on communication.

Missing from this research are studies of communication networks. If

the major works cited in the last two paragraphs are correct, research should now be directed at informal emergent relationships. Research should include an analysis of informal roles (e.g. liaison, tree nodes, etc.) and the macroscopic measures of overall structure (e.g. connectedness, centralization, etc.). Furthermore, analysis must cross different levels, exploring individual to clique, individual to department, individual to organization, and all of the various subsystem relationships.

This research about the relationship factors is missing from the hospital research and answers to our research questions can only be inferred from sociological research. Both formal and informal relationships and the configurations of those relationships warrant investigation. Although Georgopoulus (1975) summarized some microscopic investigations of superior-subordinate "problems" in hospitals, the communicative elements of those problems and the larger macroscopic questions remain unanswered.

This research may be summarized as follows. (1) Task information tends to dominate professional roles in hospitals. (2) Little research explores the communicative satisfaction of the role relationships in hospitals. (3) Hospitals tend to adapt to uncertainty and complexity by using more horizontal and diagonal formal relationships and by using more informal relationships. (4) The adaptive patterns are similar to other organizations, and there are no studies beyond some ICA Audit summaries which compare hospitals to other types of systems. (5) Relationships, relational traits and relational configurations (i.e. networks) have not been correlated to effectiveness. Which network configurations produce the most efficient output under what circumstance remains unknown.

Episodes

The research on episodes in hospitals is similar to the research about message. Speech communication scholars have begun to investigate message

interdependence in interpersonal relationships (e.g. Poole & Folger, 1981; Hopper, 1981; Rogers-Millar & Millar, 1979) and in small groups (e.g. Ellis & Fisher, 1975). These studies require trained observers, and, in an organizational context, observers aware of the organizations unique norms and values (Redding, 1968). Browning (1978) attempted to overcome some of these problems by interviews and Weinshall (1979) employed diaries in an attempt to elicit episodic data about the "minutes" of episodes and not the "transcripts" needed to describe message interdependence.

Perhaps some cross validation procedures are needed. Interviews and/or diaries may be employed to identify salient episodes. Observers need only investigate the identified episodes. Such techniques may be obstrusive, but without a regorous analysis of episodes research must focus only on the role and messages, and not on the interaction of messages which reflect the role relationships.

Interrelationships Between Components

An analysis of the interrelationships between communicator, message, relationship and episode variables requires any number of multivariate displays. Ultimately, some sort of causal modeling seems appropriate if organizations and their communication are to be regarded as phenomena and not events (see Dance & Larson, 1976). Heise (1975) argues that causal models can even account for process notions such as feedback. Hage (1980) presents a causal model of sociological elements of organization as evidence that open systems can be modeled in this way. The model we suggested earlier was intended to imply causal relationships. Our survey of literature, however, produced no such multivariate displays, causal or otherwise. The investigation of hospital communication is still atheoretical and does not provide a cogent picture of the structure, function or process of the system.

SUMMARY

This paper was intended as a purposeful review of literature about hospital communication. The review was purposeful in that it grew out of a model of communication, a model which led to five specific research questions. The last ten years (1971-81) of work published in journals and periodicals primarily designed for hospital employees and administrators was surveyed. The general conclusions of Georgopoulus (1975) and Hite and Hite (1977) were confirmed. There was very little meaningful literature.

Our intent was, however, to discover answers to our questions from this literature. Some answers are possible, no matter how tentative. What follows is a summary of our results.

Q. 1 How is information processed?

Employees of hospitals have less of a need for information than employees of other organizations. Task information they bring with them as part of their professional training, and their greatest needs appear to be in human topics and maintenance information. Role relationships tend to emphasize task information, however, and the resultant uncertainty, role ambiguity and role conflict can cause problems.

Little or no research is available on the messages and episodes which are the source and products of the information flow. There were no investigations of the influence of social networks. The research we reviewed does, therefore, provide some clues about the type of information processed, but no data about how it is processed.

Q. 2 What communication is satisfying?

Employee uncertainty is related to satisfaction with the organization. Human information uncertainty appears to be most important. Employee perceptions about the availability of feedback from supervisors and the opera-

tion of upward communication may also be related to satisfaction. Several communication factors may be, therefore, extrinsically satisfying.

Some analyses identify what message types are important for the hospital to function properly. However, the exact nature of messages, episodes and relationships which are the most rewarding remains unknown or at least unpublished. No research explored the intrinsic worth of communication to the organization or the members in it.

Q. 3 What are the internal feedback mechanisms?

Individual responses to a lack of feedback include unionization, a method of formalizing feedback. Organizations tend to respond to change in a similar fashion as other organizations. As hospitals move to more complex environments, their monitoring of the situation (i.e. their external feedback systems) results in a reliance on decentralized formal communication structures reinforced by emergent informal relationships. Individuals tend to move to greater formalization of feedback mechanisms while hospitals as a whole move toward informal systems as uncertainty increases.

Q. 4 What factors constrain communication?

The perceptions of individuals employed in hospitals are constrained by the usual physical and historical factors such as age, educational level, etc., but they are uniquely influenced by sex. Females tend to have more negative perceptions than males.

Hospital technology, the nature of the formal structure itself, affects perceptions. The information differences were noted in the answer to the first question. Some research described differences in social structure as a function of the type of hospital. The effects of these constraints on communication is, however, largely inferential, and further research is

necessary.

Q. 5 How is communication related to overall effectiveness?

Theoretically, there should be a strong relationship between communication and hospital effectiveness. In the material we reviewed no data exists to support this claim.

Messages and episodes are the two components of our model that identify it as a communication model. These are the components most familiar to the members of this association. Our discipline began as an effort to purposefully construct messages, and it has evolved to include an examination of the interaction and interdependence of those messages in episodes. What remains is to extend our efforts to an investigation of larger social contexts such as hospitals. Our literature search demonstrates that the centrality of the spoken word has largely been ignored by researchers in other disciplines exploring hospitals. To extend our own efforts is not only a challenge, but a responsibility.

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